Green Infrastructure Plan

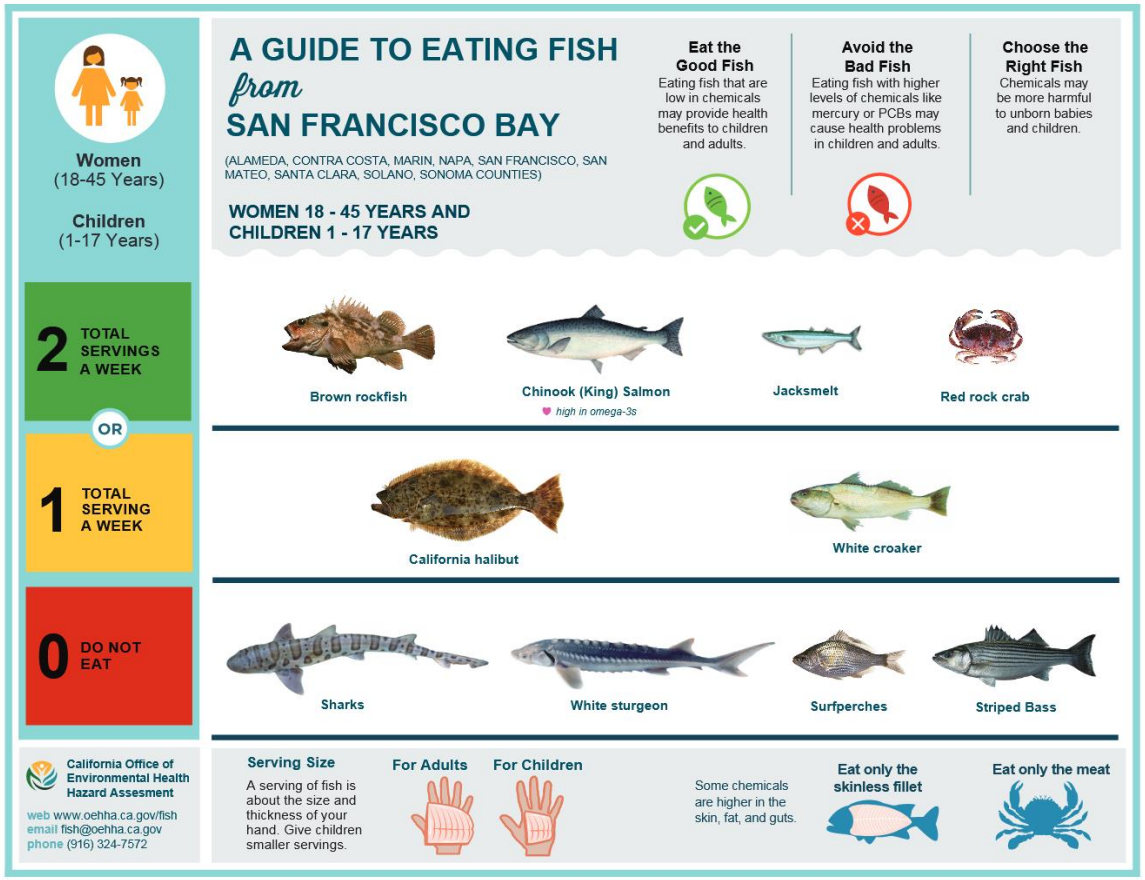
San Bruno
City Council Meeting
August 27, 2019

Presentation Overview

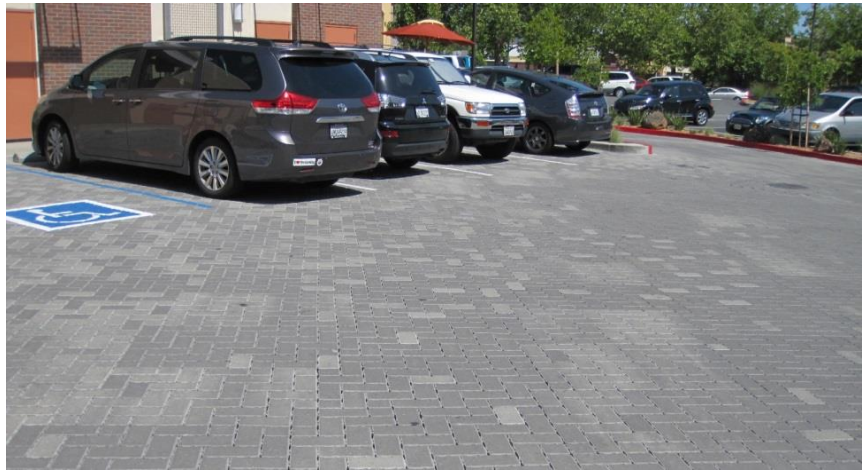
- Stormwater Challenges
- Green Infrastructure Overview
- Regulatory Mandates and Purpose of the Green Infrastructure Plan
- Plan Elements
- Plan Adoption and Next Steps

Stormwater Challenges

Impacts to Wildlife and Human Health



What is Green Infrastructure?

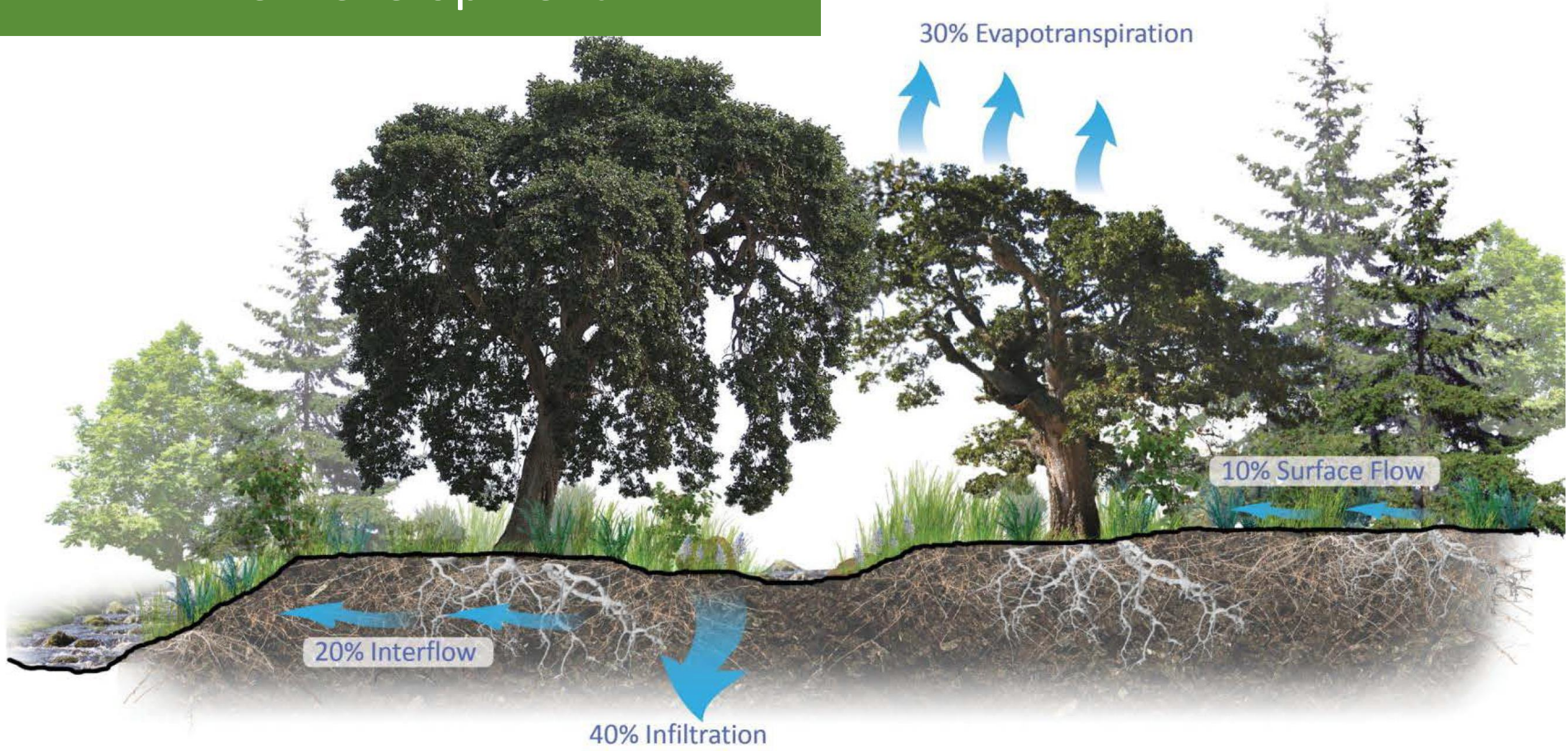


Green infrastructure uses soils, plants, and other technologies to reduce, slow down, and clean stormwater runoff before it reaches our creeks and the Bay

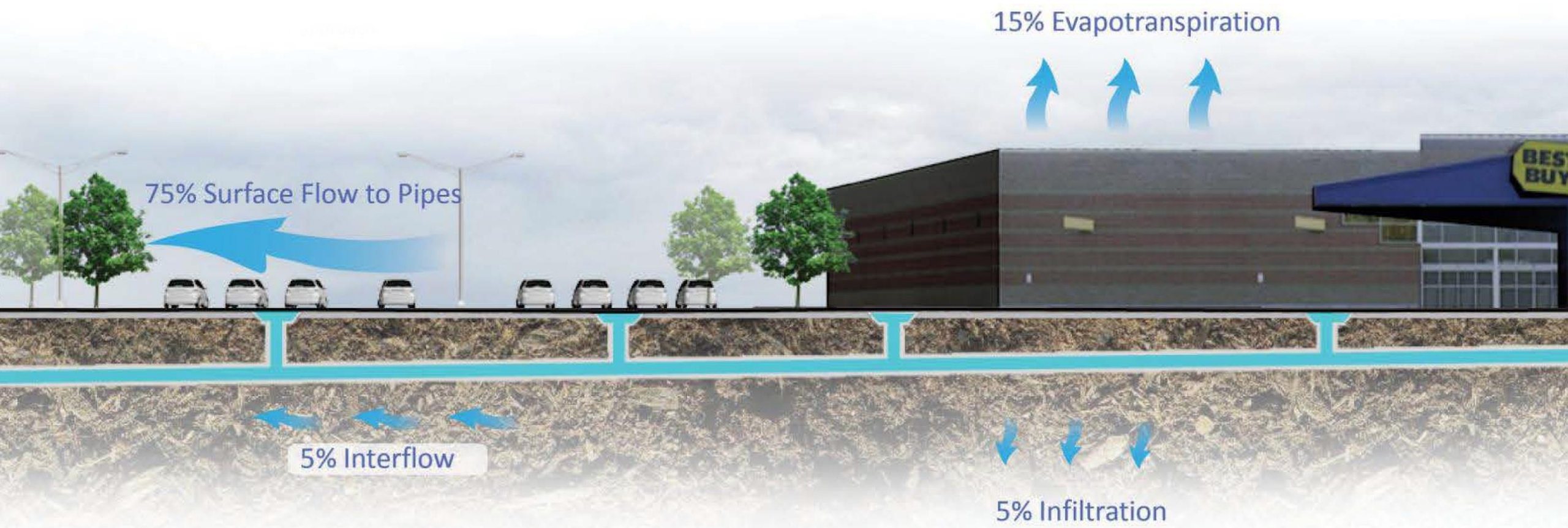
Examples of Green infrastructure include:

- Bioretention and “rain gardens”
- Pervious pavement
- Green roofs
- Rainwater harvesting systems

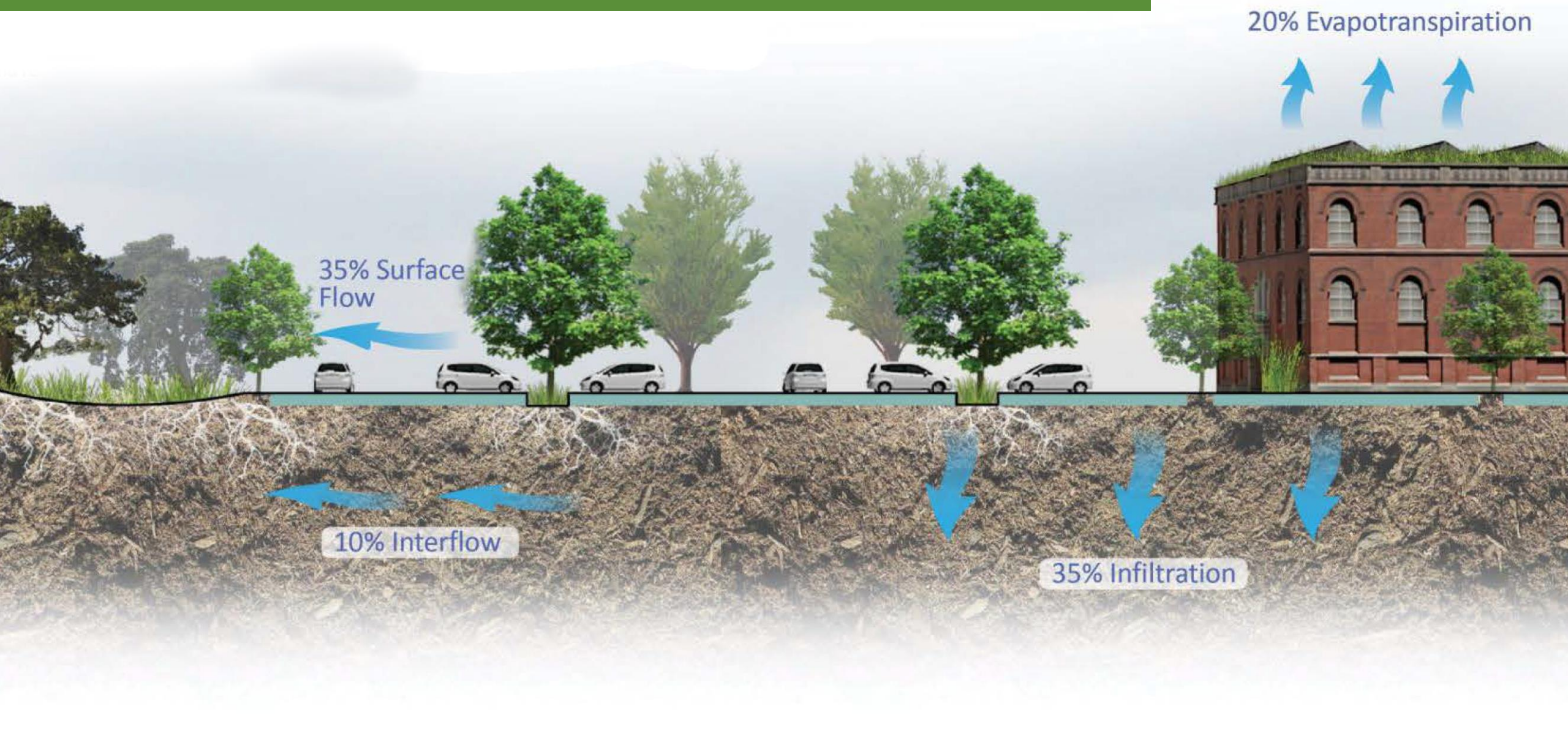
Pre-Development



Post-Development



Development with Green Infrastructure



Benefits of Green Infrastructure

Reduces Pollution

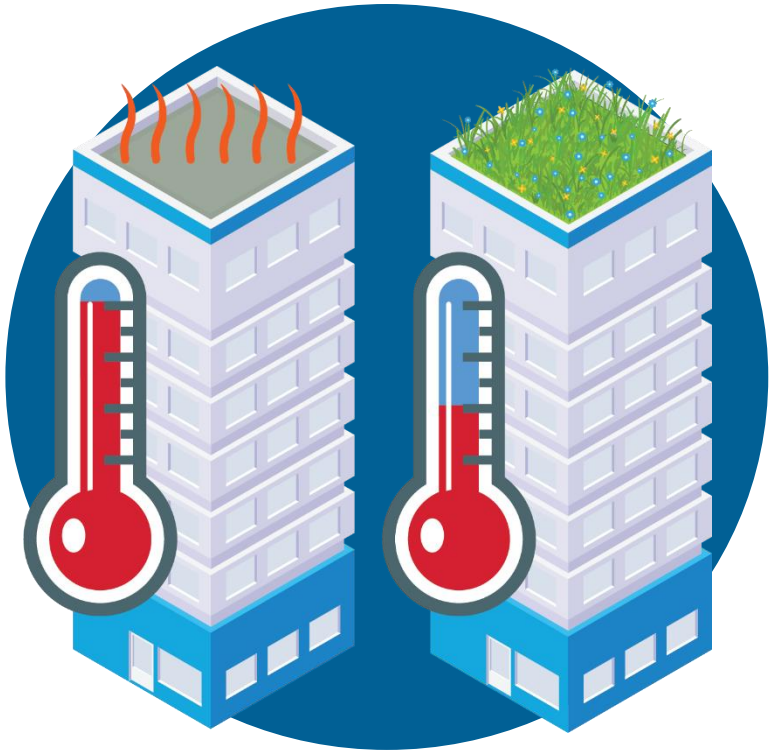
Increases Natural Habitat

Manages Flood Risk

Benefits of Green Infrastructure

Creates Greener Safer Streets

Lowers Urban Heat Island Effects

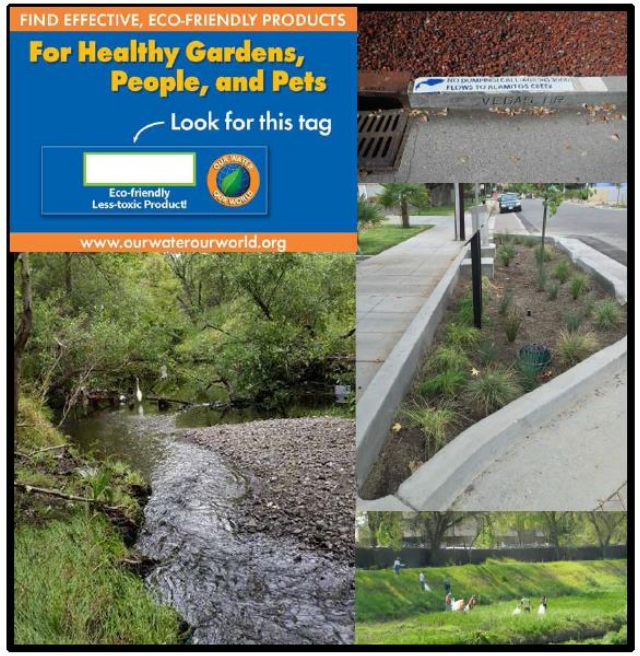


Keeps Water Local

Why does San Bruno need a GI Plan?

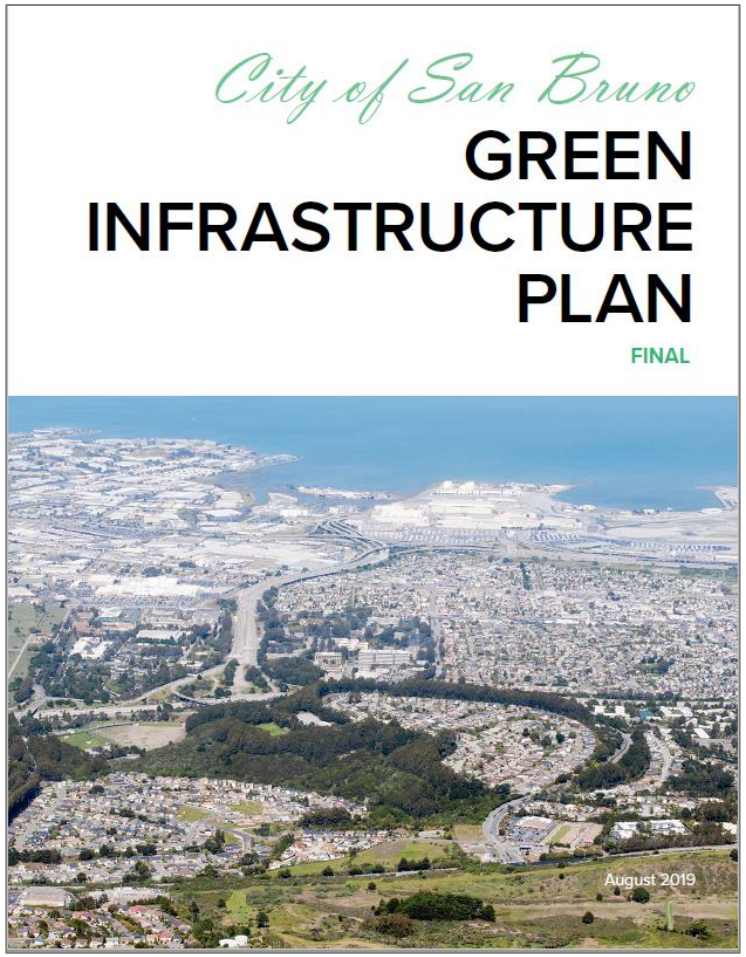
California Regional Water Quality Control Board
San Francisco Bay Region
Municipal Regional Stormwater NPDES Permit

Order No. R2-2015-0049
NPDES Permit No. CAS612008
November 19, 2015



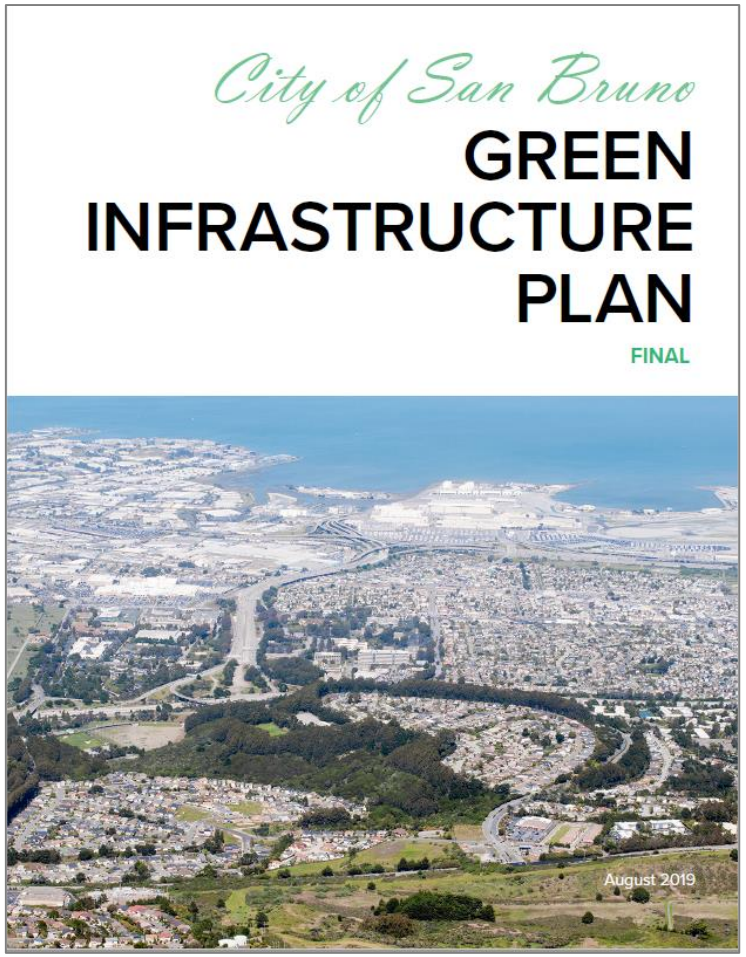
- Required to meet mandated PCB and mercury load reductions by 2040
- The GI Plan must be submitted by Sept 30, 2019
- Potential consequences for non-compliance include fines and citizen lawsuits under the Clean Water Act

GI Plan Benefits



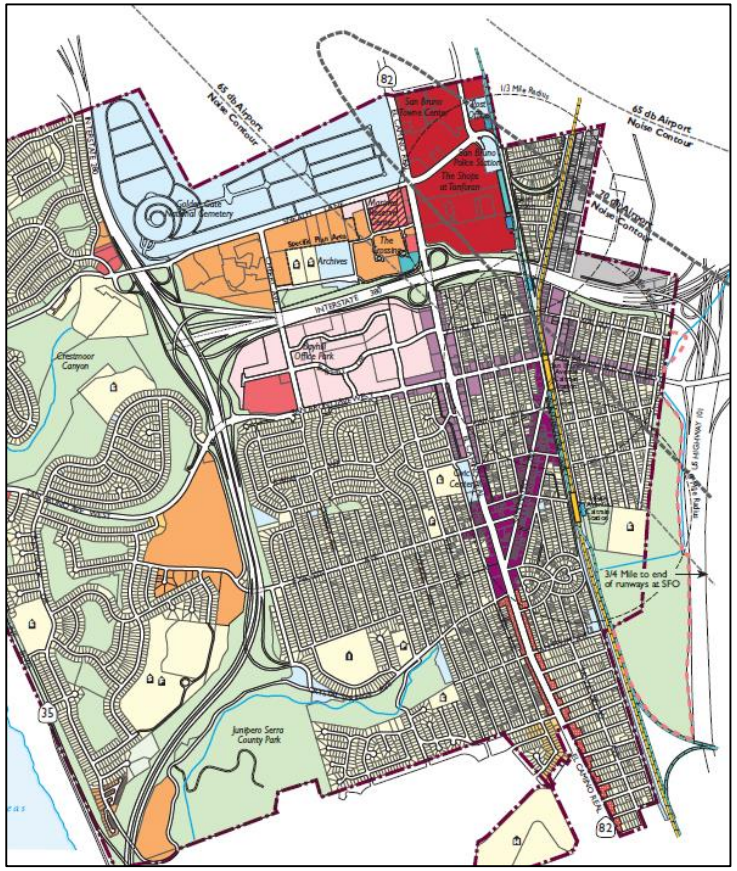
- Roadmap to integrated grey and green system
- Facilitates systematic integration of GI into existing city planning practices
- Identifies priority implementation locations and most cost-effective projects
- Consistent with goal of creating sustainable communities

Key GI Plan Elements



- Integration with Existing City Plans
- GI Design Guidance
- GI Typical Details and Specifications
- Project Opportunity Identification and Prioritization
- Reasonable Assurance Analysis
- Funding Opportunity Assessment
- Tool to Track Implemented GI

Integration with City Plans

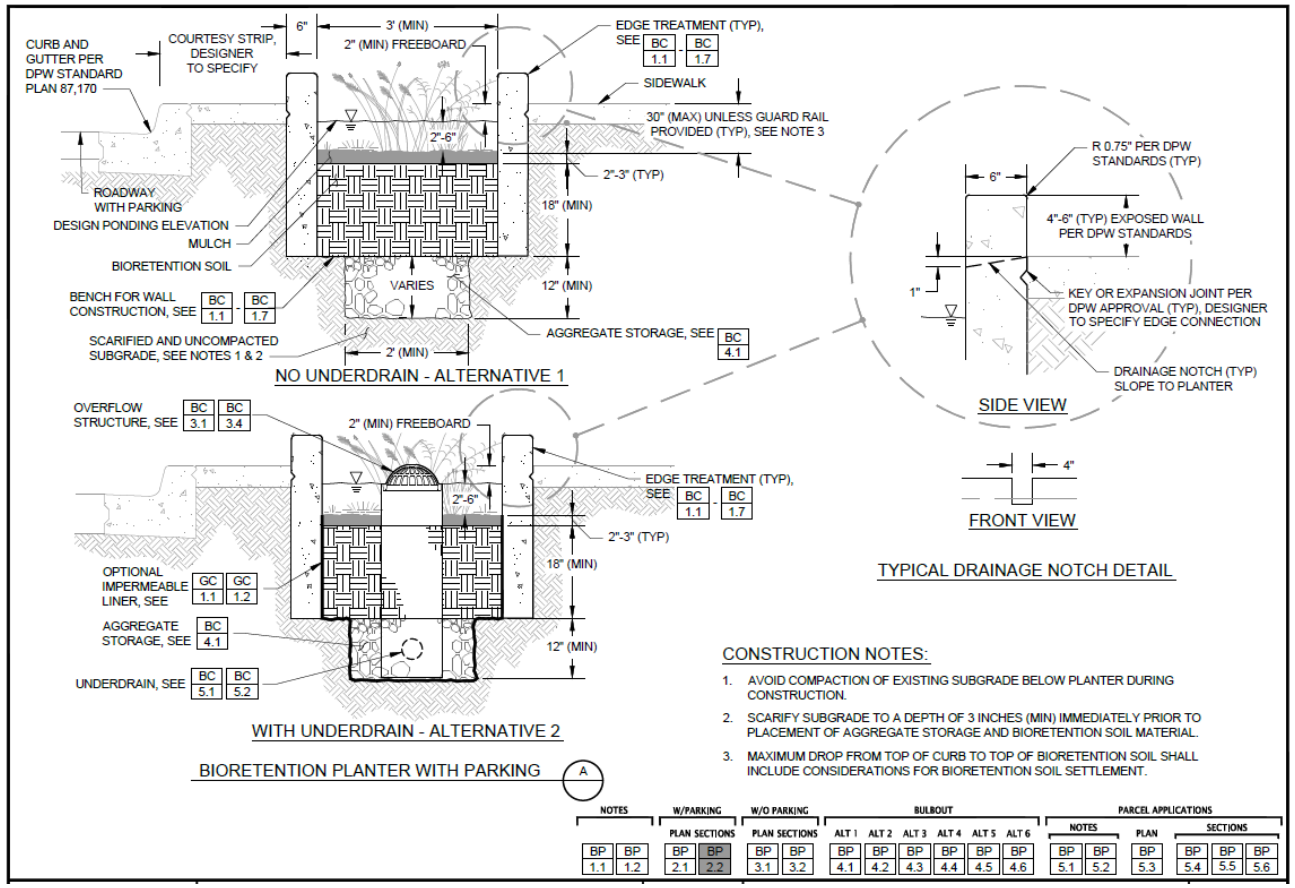


- Findings: Existing plans encourage GI and align with objectives of GI Plan
- General Plan – “require and/or promote GI on public and private land”
- Transit Corridors Plan – “explore opportunities for sustainable infrastructure and green streets”
- Workplan: Update Walk ‘n Bike Plan in 2020 to include GI-related language

GI Design Guide

- Developed in collaboration with C/CAG
- Detailed information on thirteen GI technologies
- Design and construction considerations and implementation strategies
- Operations and maintenance guidance
- Typical GI Details and Specifications

Typical GI Details and Specifications



- For use by project designers and reviewers
- Based on materials from CCSF, but revised for San Bruno
- Utility protection guidance
- Edits to existing city standard details

GI Plan Project Identification

Regional Projects

- Large Retention Projects (Parks, Schools, Large Public Parcels)
- Watershed-scale Management
- Primarily State/ Federal Funding

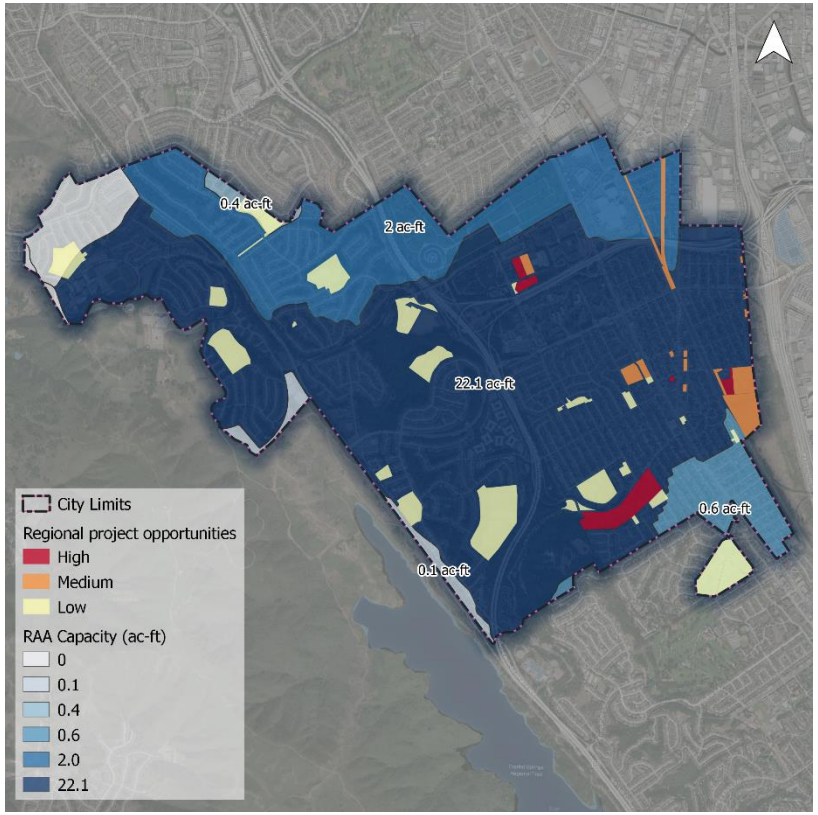
Green Street Projects

- Street Projects
- Block-Scale Stormwater Management
- Primarily Local/State Transportation Funding

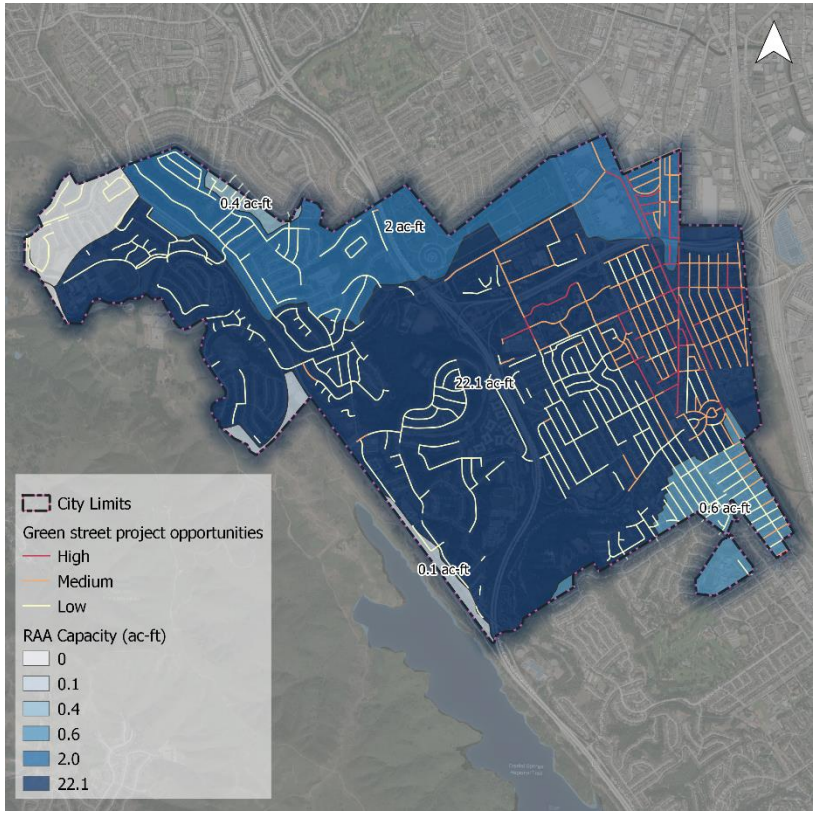
Parcel Projects

- Private and Public Projects
- Parcel-scale Management
- Primarily Private Funding via New/ Redevelopment

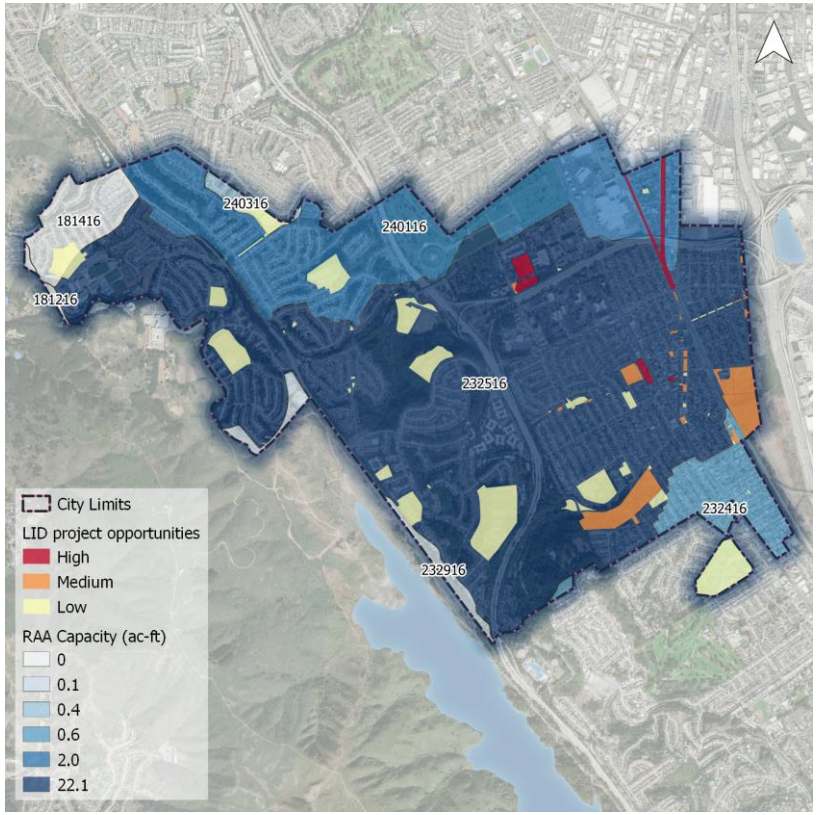
Project Prioritization



Regional Project Opportunities



Green Street Opportunities

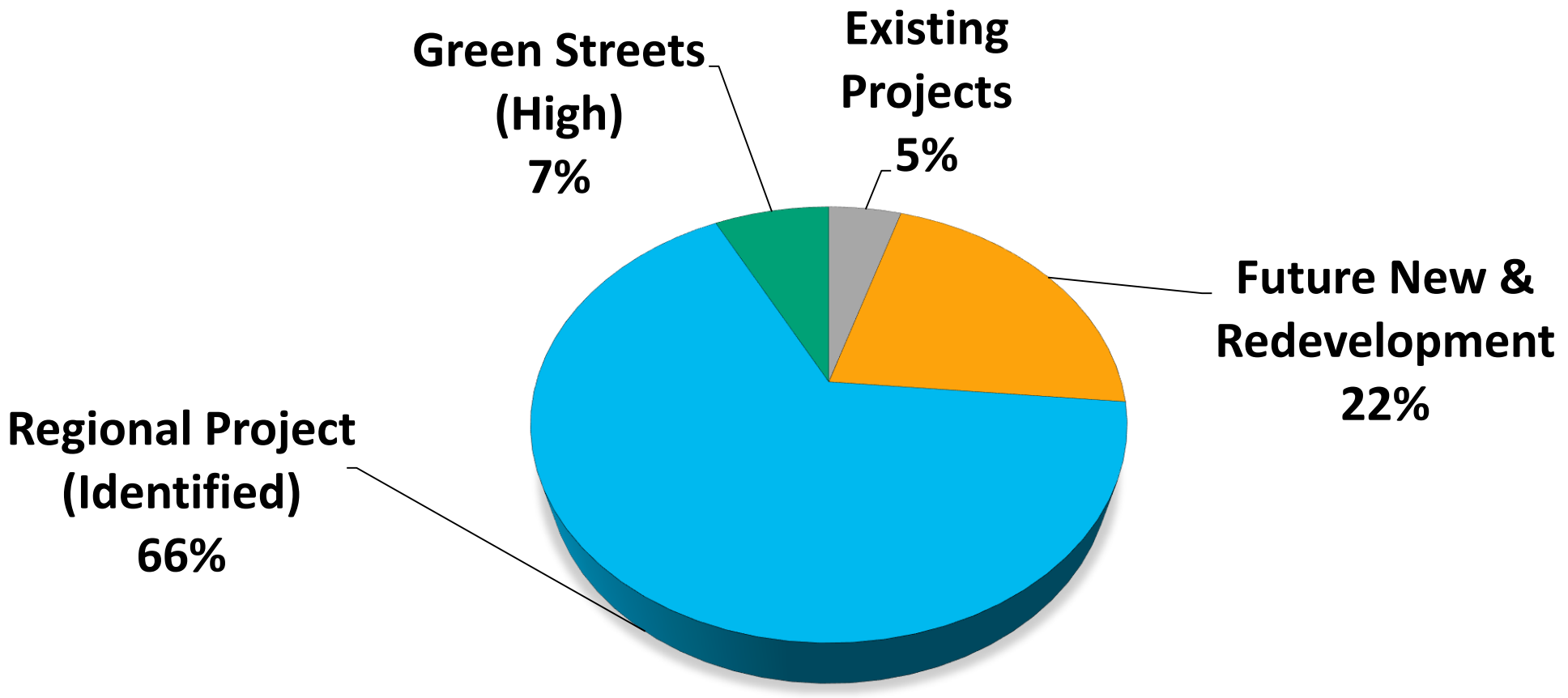


Parcel Project Opportunities

Reasonable Assurance Analysis (RAA)

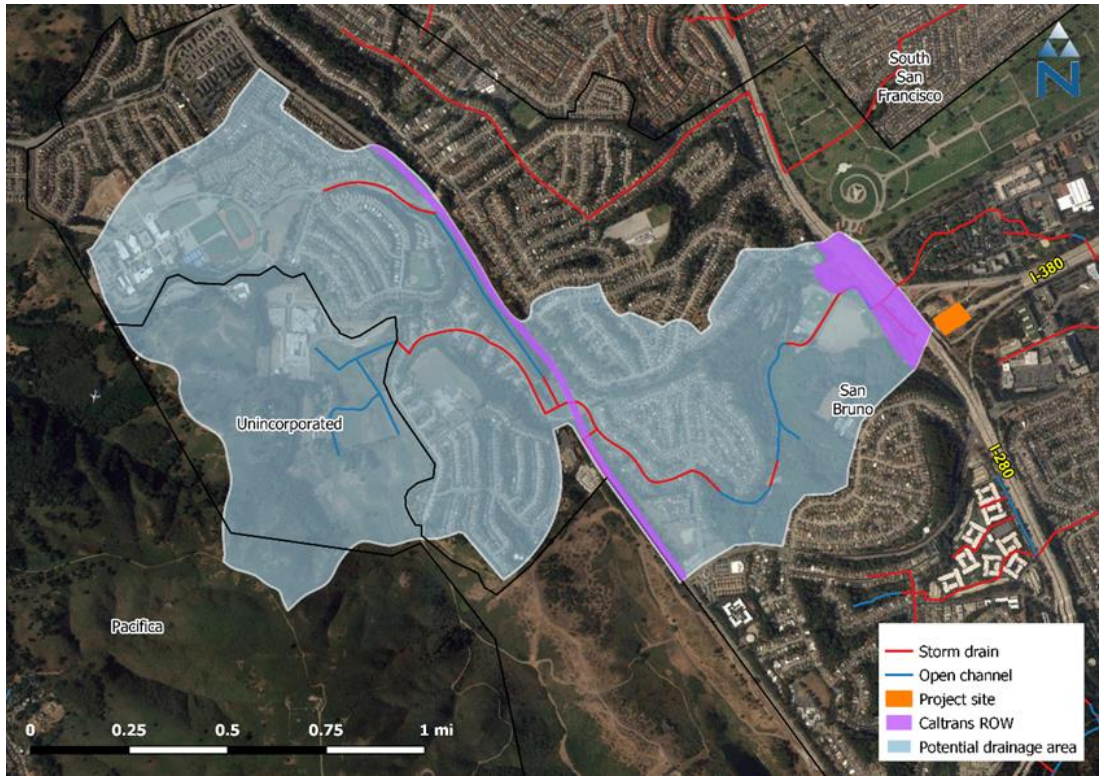
- Evaluates amount of GI needed to achieve 2040 target
- 100s of project mixes modeled
- Project types:
  - Existing GI
  - Future new and redevelopment GI
  - Regional project (identified)
  - Green streets (high, med, low ranked)
  - LID Retrofits

Project Mix to Achieve Target



Approximately 200 acres managed by GI to reach target

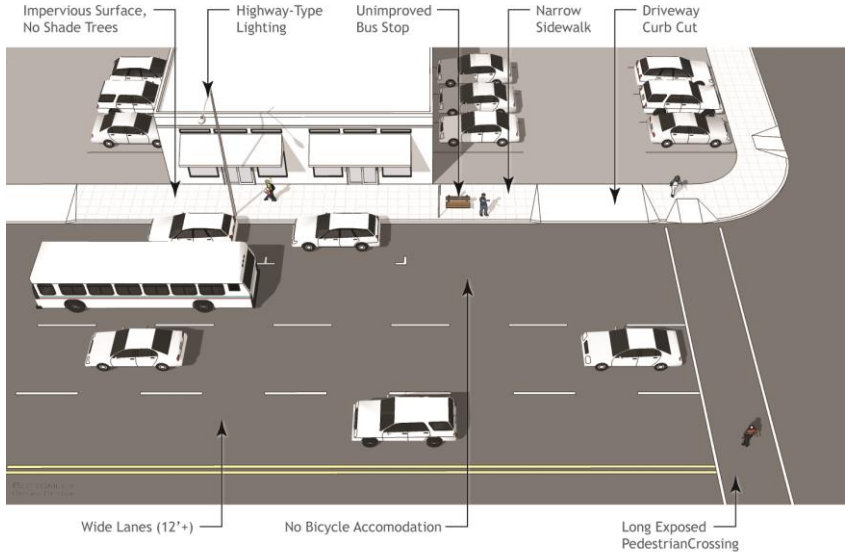
Regional Project Investigation



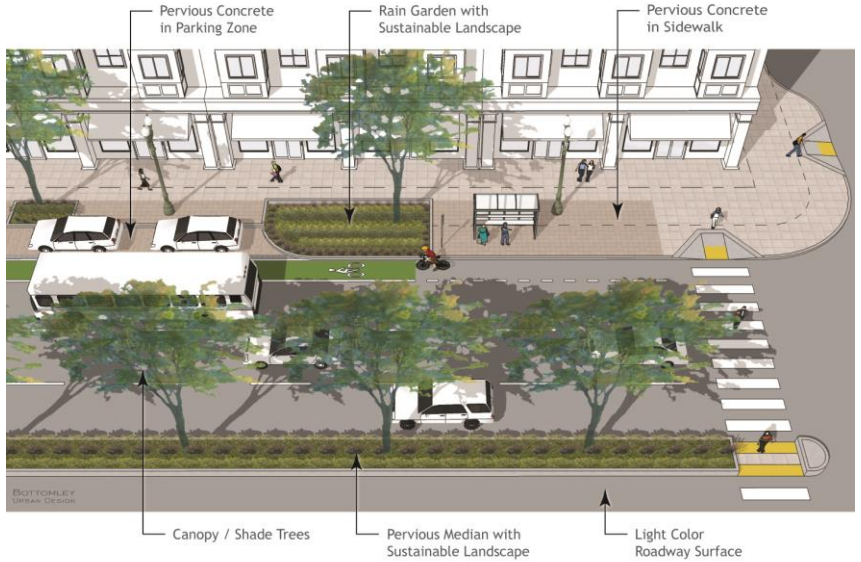
- Subsurface storage and infiltration gallery project concept
- Located on Caltrans property
- Estimated total cost = ~$20M
- Project concept is estimated to provide ~14.7 acre-feet of storage capacity towards the City goal of 25.3 acre feet.
- City received a grant from the EPA to further evaluate project feasibility

Additional Project Identification

Before



After



- GI Planning process resulted in a large pool of prioritized potential project locations
- Next steps include assessing feasibility and funding opportunities at a smaller number of sites
  - Streetscape projects in concept phase (e.g., San Mateo Ave)
  - Countywide Sustainable Streets Master Plan
  - Annual assessment of GI integration into planned CIPs

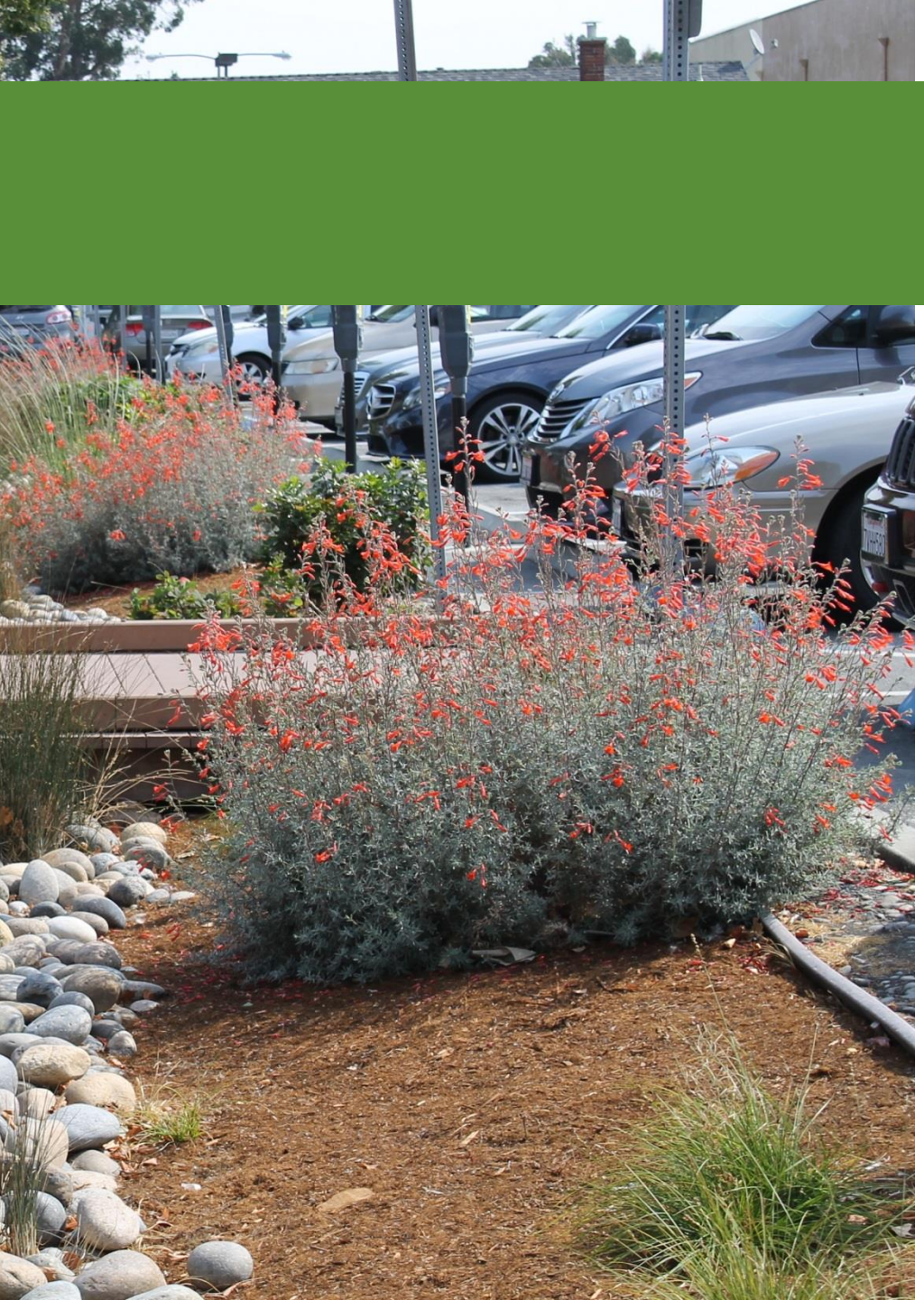
Funding Sources and Opportunities

Current/Anticipated	Options for Further Evaluation
General Fund C/CAG Parcel Tax EPA FY18 SFBWQIF C/CAG State Budget Earmark	Stormwater Fee Parcel Tax Bond Measures Grants In-Lieu Fees Permit Fee Development Impact Fees Public Private Partnerships

Plan Adoption

Represents a commitment to:

- Integrate GI into city planning and project delivery processes
- Assess feasibility of prioritized projects
- Assess future capital projects for GI integration potential
- Further evaluate long-term GI funding options



Next Steps

1. City Council adopts GI Plan
2. City staff submit GI Plan to Water Board by Sept 2019 deadline
3. Further evaluation of project concepts and funding sources
4. Participation in C/CAG initiatives including Sustainable Streets Master Plan development

QUESTIONS?